

REMARKS

A. Background

Claims 49-73 were pending in the application at the time of the Office Action. Claims 49-73 were rejected as being anticipated and/or obvious over cited prior art. By this response applicant has amended claims 49-55, 57-64, 68, and 73; cancelled claims 65-67 and 70-72; and added new claims 74 and 75. As such, claims 49-64, 68, 69, and 73-75 are presented for the Examiner's consideration in light of the following remarks.

B. Proposed Claim Amendments

Claim 49 has been amended to recite "a pressure vessel" instead of the container. Support for this amendment is found on page 4, line 3 of the specification. Claims dependent on claim 49 have also been amended to recite "a pressure vessel" and "at least one flexible walled vessel" as supported by claim 49.

Claim 59 has been amended to distinctly recite that the step of pressurising the cooling space within the container is external of the at least one flexible walled vessel as originally supported by the specification. The dependencies of claims 52, 54, 57, 68, and 73 have been changed. Other clarifying amendments to the pending claims have also been made. New claims 74 and 75 are supported by pages 8 and 9 of the specification as originally filed. In view of the foregoing discussion, Applicant submits that the amendments to the claims do not add new matter and entry thereof is respectfully requested.

C. Rejection on the Merits

Paragraphs 1 and 2 of the Office Action reject claims 49 and 50 under 35 USC § 102(b) as being anticipated by U.S. Patent No. 5,297,731 to *Bucceri*. Applicant respectfully traverses the rejection because *Bucceri* does not disclose each and every element of the rejected claims.

With reference to Figure 1, *Bucceri* '731 discloses a snow making apparatus with an outer pipe 10 and a large number of flexible tubes 16 contained within outer pipe 10. Outer pipe 10 is provided with lower and upper headers 11, 12, where the necessary connections are made for a chilled brine or other coolant to be circulated through outer pipe 10 (see column 4, lines 52, 53 and lines 65-67) and for water to flow through the individual tubes 16 (see column 4, lines 63-65). The chilled brine within outer pipe 10 chills the flexible tubes 16 to cause ice crystals to be formed on the inside surfaces of tubes 16 (see column 5, lines 62-63).

The Office Action equates the claimed “container” (now amended to “pressure vessel”) to outer pipe 10 and equates the claimed “flexible walled vessel” with a flexible tube 16. In view of the foregoing discussion of *Bucceri* '731, *Bucceri* '731 specifically teaches that the space between flexible tubes 16 and outer pipe 10 is filled with a liquid coolant during use of the apparatus. Therefore, *Bucceri* '731 does not disclose or suggest a “**pressure vessel having a cooling space adapted to contain pressurized air or gas of above atmospheric pressure**,” as recited in claim 49. Furthermore, claim 49 is clearly distinguish over *Bucceri* '731 by reciting that the container is a “pressure vessel.” There is no disclosure in *Bucceri* '731 that outer pipe 10 may take the form of a pressure vessel adapted to contain pressurized air or gas of above atmospheric pressure. The term “pressure vessel” is a term of art well understood by those skilled in the art. The above distinction over *Bucceri* '731 is further emphasized in claim 74 which recites that “**during operation of the apparatus, the cooling space of the pressure**

vessel contains pressurized air or gas of above atmospheric pressure,” and in claim 75 which recites “an air source coupled with the pressure vessel for delivering a pressurized gas to the pressure vessel.”

Claim 50 depends from claim 49 and thus incorporates the limitations thereof. As such, applicant submits that claim 50 is distinguished over the cited prior art for at least the same reasons as discussed above with regard to claim 49.

Paragraphs 3 and 4 of the Office Action reject claims 51-54 and 59-62 under 35 USC § 103(a) as being obvious over the *Bucceri* patent in view of PCT Publication No. WO 02/37039 to *Bucceri*. Applicant respectfully traverses the rejection.

Bucceri '731 has been discussed above. *Bucceri* 02/37039 discloses a containment vessel in the form of an open-top tank to hold a cooling medium (1). The hoses (2) are maintained below the level of the cooling medium (1). Thus, the hoses (2) sit effectively in a coolant bath. This is similar to *Bucceri* '731 in that in both disclosures the hoses are immersed in the liquid coolant. See for example page 8, lines 15-22 and page 11, lines 18 and 19 where it is recited that the hoses (2) are maintained below the level of the cooling medium (1).

Bucceri 02/37039 discloses that air is injected into the hose (2) to inflate and deform the hoses (2). This is disclosed on page 12, lines 10-17. *Bucceri* 02/37039 does not disclose or suggest the concept of introducing pressurized air into the cooling space around flexible hoses (2). Therefore, contrary to the Examiner's assertion in Paragraph 4 of the Office Action, neither of the *Bucceri* documents disclose or suggest the concept of increasing the “pressure within the cooling space [of the pressure vessel] to compress the flexible walled vessel,” as originally recited in claim 51. To more clearly distinguish the claim over the cited prior art, claim 51 has

been amended herein to recite that the pressure within the cooling space is increased “externally of the at least one flexible walled vessel,” thereby clarifying the location of the pressure increase.

It is submitted that the present claimed invention which involves placing the flexible walled vessels within a pressurized air space is a substantial departure over the above discussed *Bucceri* documents. The resulting apparatus is likely to be less heavy and therefore more easily maneuverable on the ski fields because it is no longer filled with coolant. The applied pressure to the exterior of the flexible walled hoses assists with formation of the snow-like substance within the flexible walled vessels. Moreover, the variation in pressure which is recited in claim 51 further assists in preventing ice build-up within the flexible walled vessels. Such a variation in external pressure would be difficult to achieve within a coolant bath.

Furthermore, claim 52 recites a **“detachment aid comprising an inflation source to cyclically or intermittently at least partially inflate the at least one flexible walled vessel to effect dislodgement of the snow and/or ice crystals from the internal walls.”** Claim 52 therefore recites a combination of both internal and external fluctuating pressures which achieve the optimum performance of the snow making apparatus.

Claims 53 and 54 depend from claim 49 and thus incorporate the limitations thereof. As such, applicant submits that claims 53 and 54 are distinguished over the cited prior art for at least the same reasons as discussed above with regard to claim 49.

The Office Action has also applied the combination of the two *Bucceri* documents against independent method claim 59 and dependent claims 60-62. Claim 59 has been amended to recite **“pressurising the cooling space within the container externally of the at least one flexible walled vessel to a pressure above atmospheric.”** The claim also recites that the cooling space contains a **“fluid comprising substantially air.”** Therefore, this claim is

distinguished over the *Bucceri* documents because neither *Bucceri* document discloses a method of making snow with flexible water-containing vessels housed in a cooling space containing air at above atmospheric pressure.

Claims 60-62 depend from claim 59 and thus incorporate the limitations thereof. As such, applicant submits that claims 60-62 are distinguished over the cited prior art for at least the same reasons as discussed above with regard to claim 59.

Paragraph 5 of the Office Action rejects claims 55-58, 65-67, and 70-72 under 35 USC § 103(a) as being obvious over the *Bucceri* '731 patent in view of U.S. Patent No. 4,107,937 to *Chmiel*.

Claims 55-57 depend from claim 49 and incorporate the limitations thereof. Neither *Bucceri* '731 nor *Chmiel* disclose a pressure vessel having a cooling space adapted to contain pressurized air or gas of above atmospheric pressure. Therefore, dependent claims 55-57 are distinguished over *Bucceri* and *Chmiel* for at least the same reasons as discussed above with regard to claim 49.

Claims 65-67 and 70-72 have been deleted, thereby obviating the remainder of the rejection in Paragraph 5 of the Office Action.

Paragraph 6 of the Office Action rejects claims 63, 64, 68, 69, and 73 under 35 USC § 103(a) as being obvious over the *Bucceri* '731 patent in view of the *Bucceri* PCT publication as applied to claim 59 and further in view of the *Chmiel* patent as applied to claims 55, 65, or 70. Claims 63, 64, and 73 depend from claim 59 and incorporate the limitations thereof. None of the cited prior art documents disclose the steps of providing a container having a cooling space containing a fluid comprising substantially air and pressurising the cooling space within the container externally of the at least one flexible walled vessel to a pressure above atmospheric.

The combination of references falls short of the claimed invention and there would be no motivation in any of the cited documents to provide a pressurized air space, rather than a coolant bath. As such, applicant submits that claims 63, 64, and 73 are distinguished over the cited prior art for at least the same reasons as discussed above with regard to claim 59.

Claims 68 and 69 dependent upon claim 49 and incorporate the limitations thereof. The cited prior art, even in combination do not disclose the idea of a pressure vessel containing pressurized air or gas of above atmospheric pressure. As such, applicant submits that claims 68 and 69 are distinguished over the cited prior art for at least the same reasons as discussed above with regard to claim 49.

D. Conclusion

Applicant notes that this response does not discuss every reason why the claims of the present application are distinguished over the cited prior art. Most notably, applicant submits that many if not all of the dependent claims are independently distinguishable over the cited prior art. Applicant has merely submitted those arguments which it considers sufficient to clearly distinguish the claims over the cited prior art.

In view of the foregoing, applicant respectfully requests the Examiner's reconsideration and allowance of claims 49-64, 68, 69, and 73-75 as amended and presented herein.

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; and/or (2) any patent application and reexamination processing fees under 37 CFR § 1.17.

In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Dated this 18th day of August 2008.

Respectfully submitted,

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